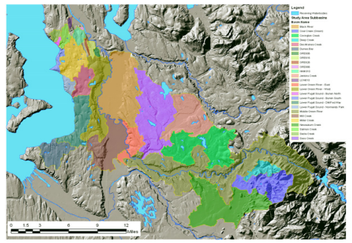
King County

STAKEHOLDER WORKSHOP #1

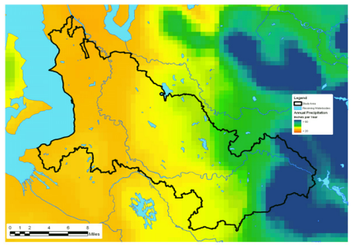
HSPF Watershed Modeling

EPA



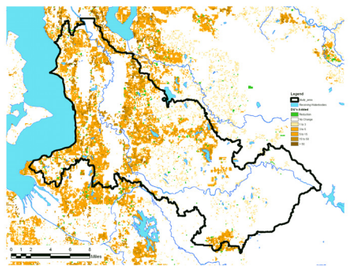
Model Domains

Study area includes WRIA 9 below Howard Hanson Dam excluding Vashon Island and City of Seattle, number of models based on scale and geographic locations and conditions.



Atmospheric

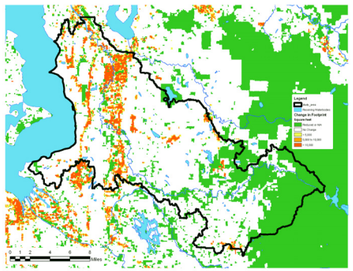
Climate scenarios include: historically observed (SeaTac) and ensemble of 20 model runs using 2 emission scenarios and 10 different downscaled climate models,



Change in Dwelling Units

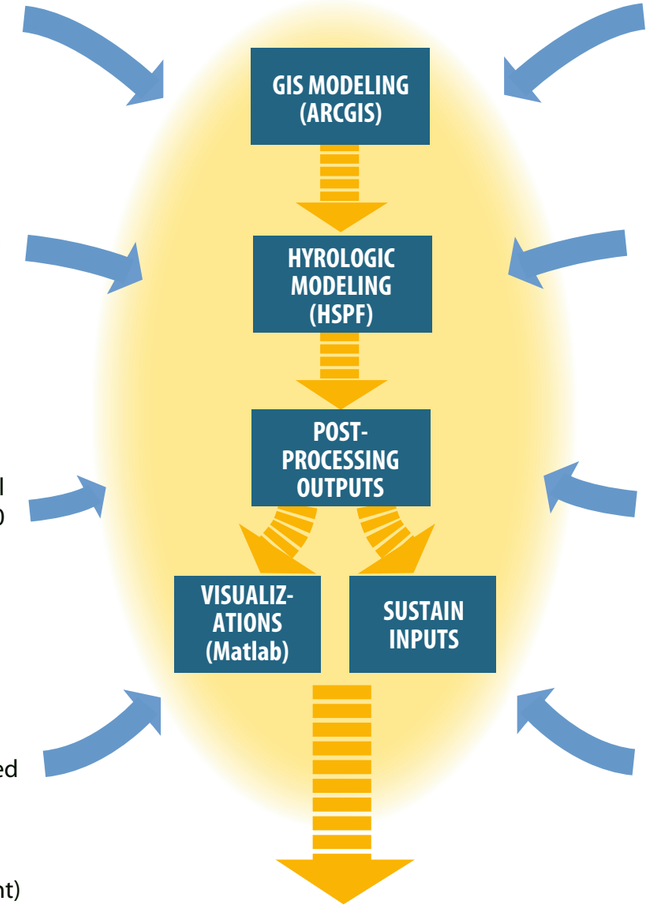
Change in UrbanSim Model Outputs simulated residential units between 2007 and 2040 used to define types of development:

New Development: 0 → DU
Redevelopment: DU ≠ DU
Retrofit: DU = DU



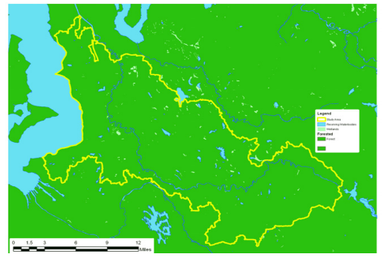
Change in Footprint

Change in UrbanSim simulated building square feet used to help define amount of impervious surface routed to LIDs (low impact development) and other BMPs.



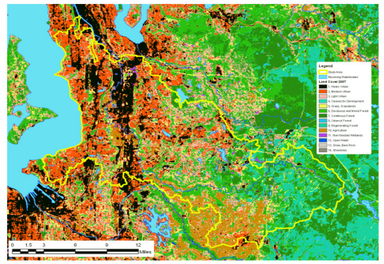
Forested

Total forest cover with known existing wetlands used to characterize pre-development conditions representing idealized state of the watersheds.



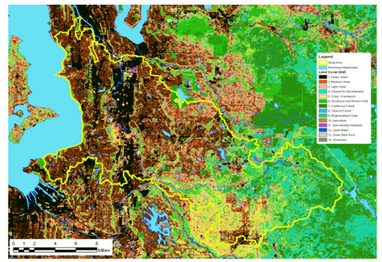
2007

2007 satellite imagery classified into 14 land use land cover categories (Alberti) used to represent current conditions.



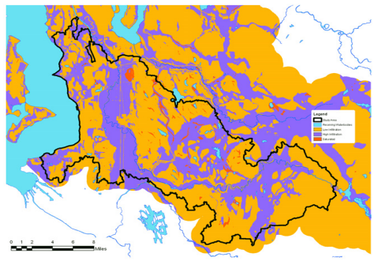
2040

Land Cover Change Model (LCCM) projecting conditions in the year 2040 using existing land use regulations.



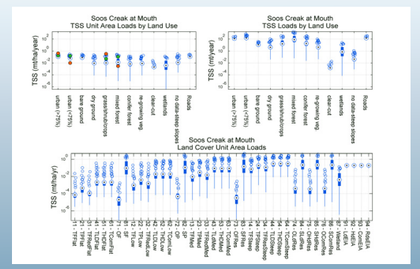
Infiltration Rates

Soil infiltration rates are used to help define types of LIDs and BMPs that might be more effective.

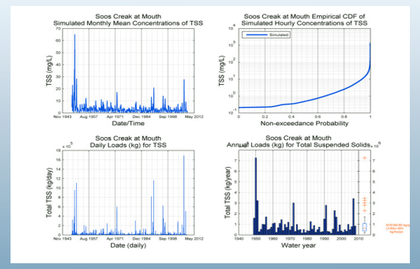


MODELING OUTPUTS & ANALYSES EXAMPLES

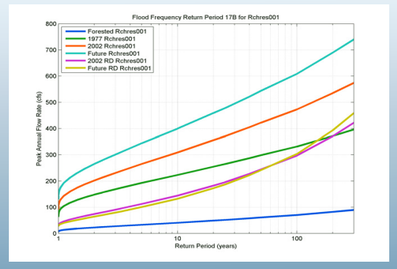
Unit Area Loads



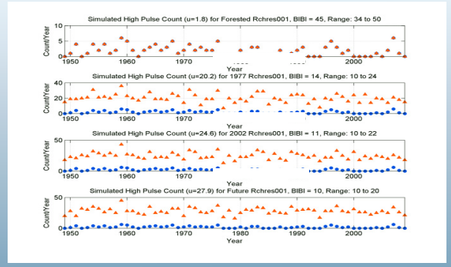
Flow Rates & Concentrations



Flood Frequencies



Stream Flow Indicators



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